

## WHAT IS CLAIMED IS:

1. A structure suitable for use in a semiconductor electronic device, comprising:

5        side walls lying over the sides of a gate electrode of a field effect transistor formed over a substrate, said each side wall having a structure convex toward the substrate side, and

         silicides respectively formed over a source and a  
10    drain and the gate electrode of said field effect transistor.

2. The structure as claimed in claim 1, wherein said structure convex toward the substrate side is  
15    arcuate or rectangular.

3. A structure suitable for use in a semiconductor electronic device, comprising:

         side walls composed of silicides, which are lower  
20    than side walls formed on the sides of a gate electrode of a field effect transistor formed over a substrate, said side walls being formed in contact with said side walls formed on the sides thereof; and

         silicides respectively formed over a source, a  
25    drain and the gate electrode of said field effect transistor.

4. The structure as claimed in claims 1 to 3,  
wherein said substrate is an SOI substrate or an Si  
substrate.

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5. A method of manufacturing a semiconductor  
electronic device, comprising the following steps:

a step for forming a gate electrode of a field  
effect transistor over a substrate;

10 a step for forming first side walls over side walls  
of said gate electrode on a self-alignment basis  
respectively;

a step for performing over etching and etching  
edges of said first side walls until the exposure of  
15 said substrate by using trenching effects at the edges  
of said first side walls;

a step for subjecting the exposed substrate to  
thermal oxidation to thereby form an oxide film  
substantially identical in quality to a gate oxide film;  
20 and

a step for forming second side walls over side  
walls of said first side walls; and wherein said  
respective steps are successively executed.

25 6. A method of manufacturing a semiconductor  
electronic device, comprising the following steps:

a step for forming a gate electrode of a field effect transistor over a substrate;

a step for forming first side walls over side walls of said gate electrode on a self-alignment basis  
5 respectively;

a step for performing over etching and etching edges of said first side walls until the exposure of said substrate by using trenching effects at the edges of said first side walls;

10 a step for further etching said exposed substrate;

a step for forming an oxide film substantially identical in quality to a gate oxide film by thermal oxidation; and

a step for forming second side walls over side  
15 walls of said first side walls;

and wherein said respective steps are successively executed.

7. A method of manufacturing a semiconductor  
20 electronic device, comprising the following steps:

a step for forming an  $\text{SiO}_2$  film over a substrate;

a step for forming Poly-Si or amorphous Si over said  $\text{SiO}_2$  film;

a step for patterning said Poly-Si or amorphous Si  
25 by known photolithography and etching;

a step for selectively growing an Si film over the surface of said Poly-Si or amorphous Si;

a step for performing etching with the selectively grown Si film as a mask to thereby remove said SiO<sub>2</sub> film;

5 a step for further performing etching to thereby define trenches in said substrate;

a step for removing the selectively grown Si film and said Poly-Si or amorphous Si;

a step for forming a gate electrode of MOSFET  
10 within a region interposed between the trenches defined in said substrate; and

a step for forming side walls over side walls of said gate electrode and burying the trenches defined in said substrate by lower portions of said formed side  
15 walls.

8. A method of manufacturing a semiconductor electronic device, comprising the following steps:

a step for defining trenches in a substrate by  
20 known photolithography and etching;

a step for forming an Si film over said substrate by selective epitaxial growth of Si to thereby adjust the depth and width of said each trench;

a step for forming a gate electrode of MOSFET  
25 within a region interposed between the trenches defined in said substrate; and

a step for forming side walls over side walls of said gate electrode and burying the trenches defined in said substrate by lower portions of said formed side walls.

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9. A method of manufacturing a semiconductor electronic device, comprising the following steps:

a step for forming a gate electrode over a substrate;

10 a step for forming first side walls over side walls of said gate electrode;

a step for depositing Poly-Si or amorphous Si over said substrate;

15 a step for performing anisotropic drying etching of Si to leave said Poly-Si or amorphous Si equivalent to less than or equal to one-half the height of said each first side wall over side walls of said first side walls, thereby forming second side walls;

20 a step for next forming a metal film and forming silicides by heat treatment.

10. The method as claimed in claims 5 to 9, wherein said substrate is an SOI substrate or an Si substrate.